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ABSTRACT

The Office of Economic Opportunity (OEO) and, most recently, the National Institute of Education (NIE) have been involved in contemplating a national planned variation study of bilingual education. In order to determine the feasibility of such a massive study, several approaches to bilingual education, with emphasis on bicultural as well as bilingual considerations, were developed. Next, usable models were extracted and cast into a planned variation experimental design. It was specified that these models represent a theoretical or methodological base, embody an observably distinct approach to education, be operational long enough to make a difference in the children's academic competencies (in this case K-3), and have reasonable possibilities of acceptance by the professional and ethnic communities having to implement and support them. The four models delineated shared the following characteristics: (1) affective, academic, and linguistic objectives on which to base lesson sequences and content, student placement, and progress; (2) growth in both English and Spanish language proficiency; (3) provision for staff training, classroom materials, and community participation at each site; (4) specific strategies relating to awareness of and respect for the cultural, linguistic, and social variables of the installation site; and (5) specific methods for assessing these strategies and objectives and for monitoring the installation and its effects on the population. The models are: the Behaviorist Model, the Immersion Model, an Eclectic Model, and a Child-Centered Model. (NQ)

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# Models of Bilingual Education, Grades K-3, for a Planned Variation Study

by

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# INTRODUCTION

Two federal agencies have been involved in contemplating a national planned variation study of bilingual education, the Office of Economic Opportunity (OEO) and, more recently, the National Institute of Education (NIE). The roots of this plan date back to 1972 when OEO began moving in earnest toward some sort of national evaluation of bilingual education. After lengthy discussion with its own staff and with representatives from the Office of Education, OEO determined that there was a basic need to research and evaluate bilingual education, and that a rigorous study of bilingual education would help OEO "develop new ways to deal with the problems of poverty" (News from the Office of Economic Opportunity, November 4, 1972). OEO's own review of bilingual educational research and evaluation to that time indicated that results were generally inadequate and, for the most part, program-specific. In other words, the findings had "low generalizability."

OEO's Office of Planning, Research, and Evaluation envisioned a multi-year study of bilingual education in an experimental mode in order to obtain data which would simultaneously further the frontiers of knowledge and serve the needs of social policy. Ultimately, OEO decided that a Planned Variation Study would (a) bring together the most current knowledge of bilingual education, (b) lead to the development of programs which would be appropriate for different locales, (c) promote the design of valid instrumentation for research and evaluation in bilingual education, and (d) yield both general and specific information about bilingual education that would facilitate decision-making at the federal, state, and local levels. Such a study would be future oriented, developing knowledge about bilingualism and bilingual education and producing various measures of program effectiveness on which educational leaders and legislators could base decisions about bilingual education.

OEO planned a series of steps which would enable it to reach a decision concerning the feasibility of such a massive study. First, it would issue an RFP to develop several approaches to bilingual education, with emphasis on bicultural as well as bilingual considerations and the specification of certain constraints which should obtain in the implementation of any potentially successful bilingual program. It was evident that these models of bilingual education need not conform to any extant program ("OEO's proposed Planned Variation Experiment in Bilingual/Bicultural Education," December 15, 1972). The recipients of these model develop grants could clearly be creative, constrained only by the need to develop a cohesive, theory-based rationale for the models.

The second step would be to award a contract to another group to review the work of the original grantees, extract usable models of bilingual education from their work, and cast these into a planned variation experimental design. A decision point would then have been reached by OEO about proceeding with the operational phases of the experiment. Their decision would be based on "three criteria: the degree of theoretical cohesiveness, differentiability, workability, and hypothetical benefits of the proposed models; the potential costs of the experiment; and the response of school district officials to allowing models to be tested, monitored, and evaluated in their districts," ("OEO's proposed planned Variation Experiment in Bilingual/Bicultural Education," December 15, 1972).

Four groups were selected to delineate approaches to bilingual education. These were the Valley Migrant League, Salem, Oregon; the National Puerto Rican Development and Training Institute, New York, New York; the Education Study Center, Washington, D. C.; and Evaluation Audits, and Systems in Education, Fullerton, California. Each group issued a report of its findings.

The Southwest Educational Development Laboratory (SEDL) was awarded the design task. As part of the first stage of the project, the National Planned Variation Bilingual Models Conference was held in Austin, Texas, from February 19 to 21, 1973. Fifty-three persons from throughout the nation met with the project staff from the Bilingual Early Elementary Program to review the four reports, discuss the implications of the proposed planned variation study of bilingual education, and make recommendations for the design to be developed by SEDL. The participants included persons expert in research and evaluation, bilingual education program design and supervision, community participation, migrant education, educational administration, and linguistics.

Before the work on SEDL's part of the project was completed, many of the research functions of OEO, including the planned variation study, were transferred to the newly constituted NIE. Though the future of this Planned Variation Experiment is unclear at this time, it is certain that NIE will be the federal agency which will decide upon its desirability, feasibility, and priority.

Proceedings of the Planned Variation Bilingual Models Conference (SEDL, 1974), brings together edited versions of the works of the four grantees, outlines the conference proceedings, and includes the reports of the five workshop chairpersons.

Toward a Planned Variation Experiment in Bilingual-Multicultural Education (SEDL, 1974) explains how such a study might be conducted, delineating evaluation parameters and procedures and four Models of bilingual-multicultural education which SEDL deems appropriate for use with Mexican American and other populations in integrated school settings. This paper presents the Models delineated in that effort.

The utility of the proposed Planned Variation study of Bilingual-Multicultural Education will ultimately depend on the selection of those Models for program development which offer the greatest promise of achieving the objectives of the experiment and the goals of the population where each Model is implemented.

## Model Delineation

### The Four Models

The Southwest Educational Development Laboratory has identified four potential Models for program development in bilingual-multicultural education to serve as guidelines for prospective Model developers should the National Institute of Education decide to proceed with this study. Models projected for development include:

I. The Behaviorist Model, based on behaviorist learning principles providing the basis for the entire curriculum, with the audiolingual method utilized as the approach to language teaching.

II. The Immersion Model, based largely on the Lambert and Tucker (1972) approach to the development of bilingualism and utilizing fairly traditional instructional methodology with provision for strong cultural reinforcement.

III. An Eclectic Model, reflecting and utilizing to a large extent compatible extant curricular materials focusing on skills acquisition.

IV. A Child-Centered Model, cognitive in focus and utilizing the child as the initiator of most learning activities.

### Discussion

A bilingual program Model is thought of as a theorectically or empirically united, comprehensive, whole-day instructional program for the kindergarten and early elementary years which will in time produce full bilingual competencies in children. Furthermore, since most Spanish-speaking children are found in ethnically integrated settings, bilingual programs must deal with the native English-speaking child as well.

An exhaustive review of Title VII programs for Mexican Americans makes it apparent that truly comprehensive program models for integrated schools exist neither in theory nor in the real world.

Theoretically and methodologically there are crucial inadequacies: bilingualism itself is not well understood, and the major learning theories, general language acquisition theories, and specific second language methodologies which can contribute to bilingual education have not yet been combined to define a truly comprehensive program.

The great bulk of extant bilingual programs are not designed to develop or even maintain the native Spanish-speaker's competencies in the home language, and they do not provide bilingual education in any systematic manner across subject areas or through several academic years. Many of the curricula are only partially or transitionally bilingual, while others never accept the child's dialect as an appropriate communication system, but rather attempt to instill the standard language immediately. Few bilingual programs are currently found in linguistically and ethnically integrated settings, though this is the typical situation in which most Spanish-speaking American school children find themselves.

The criteria[1] for formulating or designating Models for this Planned Variation Study of Bilingual-Multicultural Education specified that each Model considered (1) represent a theoretical or methodological base, (2) embody an observably distinct approach to education, (3) be operational long enough to make a difference in children's academic competencies (in this case, four years, K-3), and (4) enjoy reasonable possibilities of acceptance by the several professional and ethnic communities who would have to implement and support it.

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[1]The reader is referred to the companion volume, Proceedings of the National Planned Variation Bilingual Models Conference, for an understanding of the constraints which underlie these criteria.

## Characterisitcs Common to the Models

The four Models presented here will share the following common characteristics:

1. Affective, academic (content area), and linguistic objectives on which to base lesson sequences, lesson content, the placement of pupils, and the monitoring of student progress.
2. Seek to produce growth in language proficiency in both English and Spanish.
3. Staff training, classroom materials, and community participation for installation at a Site.
4. Specific strategies relating to awareness of and respect for the cultural, linguistic, and social variables represented at an installation Site.
5. Specific methods for assessing these strategies and objectives as well as for monitoring installation at a Site and the effects of that installation on the population.

## Program Features

Though each of the four bilingual program models have been designed to be operationally distinctive in practice, certain evaluation and curricular needs of Planned Variation require that all parties to the experiment establish common linkages and practices among themselves, while ethical and pedagogical constraints require that certain programmatic features be manifest in all field activities of the study. Hence, common features are specified in this section regarding the Planned Variation Study of Bilingual-Multicultural Education as a whole.

## General Curricular Characteristics of the Models

Each Model must not merely supplement the regular English monolingual school program but in every sense be a substitute for it. At least four content areas, providing a full-day program of instruction for grades K-3, must be addressed: bilingual language arts (i.e., in English and Spanish), mathematics-science, social studies, and cultural-affective activities (including music, art, self-concept). These areas will be commonly evaluated by the PREA across all Models and will constitute the basic criteria for Model success. In addition, each Developer is expected to conduct independent, Model-specific evaluation in these areas.

How the four areas are presented will depend on each Model's particular approach. It should be emphasized that all Models have the same language objective: full bilingualism, that is, full fluency and literacy in both Spanish and English, by the end of the third grade (Leyba and Guertin, 1973). The philosophy underlying this effort is a developmental approach to bilingual education, as opposed to transitional or loosely defined maintenance programs. A developmental approach offers the most curricular options to students and Sites beyond the third grade, and requires a comprehensive, full bilingual effort in Program development. The basic success of a developmental approach is manifest when student achievement trends in receptive and productive skills in both English and Spanish are upward.

All Models should be able to accommodate the child's home language or dialect. The Immersion Model is a partial exception; however, when instruction in the child's native language in the second or third grade is begun, the Immersion Model should provide for this also. Although the question of instruction in standard language forms has posed some controversy (Bull, 1964; Hymes, 1970), the introduction of so-called standard dialects of English or Spanish is normally necessitated as education progresses, for the regional

dialects cannot normally support such a full curriculum as that which each Model incorporates. The point to be made, however, is that acceptance of the local dialect is a valuable motivating factor which the teacher can utilize in all content areas except for specific language development aspects of the curriculum (Fishman and Leuders-Salmon, 1972; Gaarder, 1970). The manner in which each Model introduces the standard dialect should be as unobtrusive as possible, building, for example, upon a child's conceptual-lexical repertoire and presenting alternate words and sentence constructions without denigrating the home language. Stress should be placed, as soon as practicable, on the distinction between formal and informal settings as a social convention (not as better or worse or higher or lower forms of language), where one dialect is more functional than another. Language experiences--formal instruction or casual interaction--should continue to use the home language in appropriate contexts in order to develop a child's dialectal competency as well.

All Models should consider utilizing one or more of the bilingual educational TV programs which will be available by the time the Models are operational. Carrascolendas and Bilingual Children's TV are particularly recommended, and formal linkups between the evaluation teams of these programs and each of the Developers and the other principals in the study may be possible. These programs promote the status of bilingualism and present interesting educational experiences for children in the grade levels covered by the Planned Variation Study.

If different teachers are used for language instruction, it is important that they have equal prestige in the classroom and, if possible, have similar socioeconomic backgrounds. The experience which the Southwest Educational Development Laboratory has had in bilingual education indicates that one pitfall of differentiated staffing in bilingual education programs occurs when a high-status or more powerful figure takes charge of English instruction and assigns a

subordinate the role of instruction in Spanish. Such risks to bilingual competency, motivation, ethnic standing, and self concept implicit in these practices should be eliminated from this study. Hence, Developers using team teaching or differentiated staffing in their operational language programs must provide for equal status of Spanish and English instructors.

## Sequence of Second Language Instruction

The systematic development of the four basic skills in second language instruction should proceed in a specified sequence, repeatable for each distinct learning objective until basic competency in the second language is achieved: listening (auditory comprehension), speaking (articulatory fluency), reading (graphic decoding), then writing (graphic encoding). In this manner pupils will not be asked to repeat entirely meaningless phrases, to read what they cannot yet understand or articulate, or to write what they cannot yet decode (Gaarder, 1970).

Though this sequence is not as stringent in developing the child's first language competency, the Developer must ensure that the curriculum content and process does not introduce language which is not yet functional to children but is indeed inherently consonant with their experiences or is adapted appropriately to their needs. Ordinarily, this means an oral (listening, speaking) language competency base.

## Evaluation of Language Instruction

Each of the four language skill areas--understanding, speaking, reading, and writing--must form an important base for evaluation of each Model's second language effort.

Evaluation of the second language competency should not be limited to these four skills; however, it is recommended that the following behaviors

associated with second language acquisition also be measured: (1a) anxiety associated with a general classroom activity and (1b) second language activity; (2) linguistic passivity (reluctance to initiate or elaborate second language utterances); (3) linguistic antagonism (return to original accent, use of native language patterns in the second language); (4) attempts to translate superfically; (5) hypercorrection (especially in older students); (6) fixated second language behavior; (7) relative inability to distinguish nuances of sound; and (8) language dominance (Rivers, 1964). These additional measures should permit a finer assessment of each of the Models than is currently possible. Should the measures prove to be highly usable by a variety of school personnel, they may, in addition, provide guidance in Program administration and individualized teaching.

## Additional Instrumentation for Evaluation

All four bilingual-multicultural Models will be summatively evaluated using the same criteria and the same instruments. Where students' achievement or affect are concerned, extant standardized tests will be insufficient--if not inadequate--to the assessment task. Some proponents of the open educational setting (Chittenden and Bussis, 1971) to be used in the Child-Centered Model, for instance, believe that the standardized achievement test cannot demonstrate the unique behavioral contributions of the Program because it usually does not sample them. In general, the measures used should reflect the various concerns and permit diverse <u>types</u> of questions to be asked of the data. For example, the use of Piagetian measures (adapted and validated for cross-cultural comparisons) permits the evaluator to view educational outcomes in a different way. Similarly, measures of expressiveness, creativity, and other instruments would allow the early elementary-aged children in the experiment to elaborate their responses or pursue alternative strategies for solving a problem. The assessment of

children's personal growth and inter-ethnic contacts should consider children in real-life circumstances or pose realisitc situations for the child to cope with.

Parental assessments must be part of the evaluation of every Model. In particular, it is important that measures of parental attitudes toward and knowledge of the Site school and the Developer's bilingual Program be utilized. Behavioral indicators of parental interest should also be specified. Since bilingual programs occasionally cause divisive opinions within the ethnic community, instances of acceptance and conflict must be documented by the Site and the Developer and assessed independently across time.

Another important area for instrument development has to do with valid general disabilities testing. There should be at least one instrument that accurately distinguishes developmentally-normal Mexican American children from their exceptional peers. Devising more refined measures for diagnosing specific exceptionalities may not be properly within the purpose of this Planned Variation Study, but it is important that Sites not arbitrarily or otherwise inaccurately exclude children from participation in the bilingual education Program because they are supposedly disabled in one or more ways and therefore assigned to special education programs, thus affecting the composition of certain classrooms in which a Model may be implemented. Techniques, such as those embodied in Mercer's (1971, 1972) pluralistic diagnosis of exceptionalities, which avoid the pitfalls outlined by Bernal (1972), are recommended.

## Special Considerations: Sites and Developers

All Sites must guarantee integrated classes for the conduct of this study. At the very minimum, two ethnic groups, Mexican Americans and Anglos, must be integrated in classrooms. In the procedures which NIE establishes for

Site selection, it is recommended that positive weighting be given to applications submitted by potential Sites which can bring together three ethnic groups--Black, Anglo, and Chicano--during those years in which the Planned Variation Study will be conducted in that school and community setting.

The Developer and the Site must place heavy emphasis on full Model implementation from the beginning. The Brookings Institute in this "Brief Overview of Planned Variation in Head Start and Follow Through" (1972) emphasized that no Head Start model proved to be superior to any other during the planned variation evaluation; rather, it was the model's degree of implementation success that accounted for differential child development.

Every Model Developer must also address the entry of new students into the Program at various grade levels. Whether a minimum period of time will be designated (for example, two years, thereby prohibiting new entries at grades 2 or 3), and other related issues considered critical to Model implementation success should be specified.

## The Behaviorist Model

### Model Description

The Behaviorist Model is based on a behaviorist learning theory as defined by Skinner (1948). The theory holds all learning to be fundamentally a process of conditioning. The student is led through a series of stimulus-response situations in which his active response is followed by immediate reinforcement, so that behavior becomes conditioned (Bruno and Simches, 1962). The extension to language learning specifies a careful repetition of structured sentence patterns until their responses become automatic. The method and techniques employed in teaching language in this Model are known as the audiolingual method.

The audiolingual language teaching method was developed in the late 1940s and early 1950s and came to enjoy great prominence and success throughout the 1950s and 1960s (Fries, 1952), causing a revolution in language teaching. The method has been adapted for second language learning in children, maintaining the group mode of instruction to meet the needs of large classrooms. It is the most popular language teaching method currently in use and has been accepted by teachers in traditional self-contained classrooms for many years.

The curriculum organization of the material lends itself easily to objective statement, so that behavior in language arts as well as other curricular areas can be specified, enabling conditioning of behavior and incremental measuring of mastery.

In this Behaviorist Model, the sentence structures used in lessons from the particular content areas that are taught in the target (or second) language must be carefully coordinated with the second language competencies

already developed. It is understood that instruction in content areas is to be initiated in the first language and maintained in that mode exclusively, until the child's second language competencies enable him to accept content instruction in that language as well.

The language learning area of this Model provides the integrative basis for the other content areas. The Developer should specify which content areas are to be taught in the second language, when they are to be introduced, and how to develop the process for accomplishing the integration of language skills and content skills. Examples are Mathematics-Science, because it is a technological language in itself and because it is taught in English in many parts of the world and is almost always utilized in English; and Social Studies, because its potentially familiar content might be presented earlier in the second language than other content areas.

The audiolingual method is fraught with pedagogical pitfalls despite its popularity. Teachers too easily resort to translation and premature language explanations instead of letting the child simply develop competencies through the language drills and associated activities. The tendency to overuse the repetition function of the method has proven deadly for learners. Also, the teaching of isolated language elements should be avoided, and manageable, non-artificial "expressive wholes" (Newmark, 1970) should be used.

Vocabulary drills as such should be avoided. The learning of vocabulary should be subordinated to expanding the child's structural knowledge of the second language (Rivers, 1964) and permitted to take place normally during content instruction.

Student boredom is one of the problems often encountered in audiolingual classes, especially if language drills are not interspersed with other language-related activities or if they assume too great a part of the total

school experience. Pleasant associations with second language learning activities must be formally provided for in the curriculum. It is strongly recommended that newly acquired second language elements be coordinated with other formal learning experiences and practiced in a real-life setting, with opportunities for school-community contact built in.

Many language mistakes made by children in the normal course of language development are not well accounted for by a purist's reading of the audiolingual literature. Behaviorism, however, should provide a sound basis for this apparent lack through such techniques as modeling, which consists of presenting a model of the behavior you want the child to imitate and then reinforcing the child's behavior when he does imitate you, and shaping, which consists of reinforcing a child's increasingly closer approximations to a desirable behavior (Southwest Educational Development Laboratory, 1972a). As language skills become more highly developed in the normal course of bilingual instruction (in the language arts and other curricular areas), formal language practice should begin to focus on individual children's special needs as assessed by the teacher. Large group instruction can begin to break down into smaller groupings based on individual needs. The general behaviorist orientation of the curriculum, however, would continue to operate throughout.

## Treatment of Language

Following the audiolingual methodology, children learn a second language through a careful repetition of modeled, structured sentence patterns as well as through cued stimulus-response language development exercises until their responses become automatic. Reinforcement provides the motivation for progressing through the stages outlined in this Model for language learning.

The language structures are presented as sentences comprised of strings of words in a specific order. Meaning of sentences and relationships between sentence structure types are intuited through the process; they are not directly addressed in this Model.

Some of the basic features of the audiolingual approach to language instruction which are relevant to this Model are summarized from Carroll (1953) and Brooks (1964).

1. Because speech is primary and writing is secondary to language competency, and in the order of development, language must be learned first of all as receptive and then as productive speech. In developing the four language skills, the teacher follows the natural sequence which the students followed in learning their own language. That is, they first learn to understand, then to speak, later to read, and finally to write.

2. Second language learning is basically a mechanical process of habit formation, and these habits must be automatized as much as possible so that they can be called forth without conscious attention. Language learning, therefore, is not problem solving but the formation and performance of habits; the process is a type of learning that involves the establishment of a set of habits that must be so well learned that they function automatically.

3. The automatization of habits occurs mainly by practice, that is, by repetition. Stress is laid on the need for overlearning of language patterns by a special kind of drill known as "pattern practice." In these drills, the student is given a stimulus, and he is immediately reinforced by hearing the correct reply. The student is gradually conditioned to produce the appropriate linguistic form, without consciously making that selection based on some grammatical explanation. Pattern drills are to be taught inductively; that is, the student practices the patterns before the teacher explains the structure of the language to him. Knowledge of the rules is unnecessary and may obstruct the student's progress.

4. The foreign language system is to be established separately from that of the native language.

5. In the initial stages of language instruction, meaning tends to be discarded.

The audiolingual teaching techniques incorporated in the Model include the following:

1. Pattern drills, including modeling by the teacher of simple sentences, sentences in which a word or phrase is substituted for a word or phrase presented earlier, sentences which are expansions of sentences presented earlier and sentences which are tranformations of earlier sentences. In each case the child repeats the modeled sentence so that practice and repetition provide the basis for learning sentence types (Southwest Educational Development Laboratory, 1972c).
2. Memorized dialogue, including learning passages by memory in which sentence patterns are presented, giving the students practice that provides for learning sentence types.
3. Dialogue variation, similar to transformations in Pattern Drills, above, where dialogue is presented and varied, giving the students practice in dialogue and the ways it can vary.

True to basic audiolingual tenets, discussion concerning meaning and the introduction of vocabulary lists are to be avoided, particularly during the early grades (Politzer, 1961). Meaning, according to this Model, is intuited from the context in which language is practiced.

Speaking should initially be disassociated from reading and writing. Proposed levels of expected receptive and expressive competence should be

clearly defined for each grade level.

The use of a language laboratory is strongly recommended with clearly defined constraints concerning when it is to be used, how often and for how long a time, and under what kinds of supervision children will use it. A language laboratory does not have to mean hardware; it can be a practice session with a teacher, aide, volunteer, or peer tutor. There are alternatives in this respect that are appropriate for this Model, if these alternatives are clearly specified with behaviorally stated objectives of what the language lessons are to accomplish. The teacher, though more of a manager, is still the center for prescribing what is necessary for each child.

## Classroom Organization

The Behaviorist Model is teacher-centered, since the teacher and other classroom personnel are responsible for instruction and realization of specified behaviors even when programmed materials or language laboratory equipment is utilized.

Traditional to classroom organizational patterns for grades K-3, particularly with regard to meeting objectives in language instruction, provision for small group work and access to multimedia and language laboratory facilities is recommended. Learning centers can be arranged within the traditional self-contained classroom to accommodate children in small groups so that different interest areas and levels of mastery can be operating simultaneously. Both teacher and pupil training is needed for self-directed learning to function smoothly, but it has been shown to be a successful innovation in large, self-contained, teacher-centered programs (Southwest Educational Development Laboratory, 1972a).

Once grouping is established, additional groupings may profitably be made to individualize instruction in each content area. Peer tutoring, especially in language instruction, is also feasible and may promote contact between Spanish-dominant and English-dominant children, whatever their ethnicity, from the outset of the Program. The Developer must decide whether all grade level children will be separated or grouped together for language learning or whether language lessons will take place at different times in the same classroom. For example, will children be taken from their classrooms for language development, or will language development occur in self-contained classrooms as a regular part of the class day?

## Materials

The Developer should define an explicit time line for the development and functions of both languages; for example, the point in time where reading is begun in the first language will be different from the point where reading is begun in the second language.

All language materials must be carefully sequenced within the communicative skills of listening, speaking, reading, and writing. The Developer, likewise, will have to adapt content curriculum commensurate with sequential language learning; so that, for example, no activity will require communication skills that have not been introduced.

These materials should be commensurate with the developmental level of the child based on current findings that biological age levels can be identified for acquiring certain competencies enabling control of structures. For example, children acquire certain complex structures of one type before they acquire other structure types (Ervin-Tripp, 1973). Secondarily, these materials should reflect a contrastive analysis of the first language

structures operant at each age level and comparable structures in the target language. The sequence of instruction, in short, must proceed from the language used by the child and not require verbal performance which is not appropriate for the child's developmental level. The sequence should also be based on those competencies which are known to exist which enable the control of modeled structure.

Almost any extant curriculum in mathematics, science, and social studies can be adapted into the audiolingual system with careful control of the language structures already described. The exception would be those materials based on open-ended questioning, for example, the Social Education Program (Southwest Educational Development Laboratory, 1973d), especially for the early grades. Materials must be screened to ensure that ethnic content avoids cultural stereotyping. The teaching staff can also be sensitive to ways they can adapt curriculum to the cultures represented in the classroom as well as to the cultural needs of pupils. The Cultural-Affective area, containing folklore, rhymes and limericks, adivinanzas, music, and self-concept activities, could be utilized initially to develop listening skills and later to provide opportunities for singing, dialogue, and the like.

## Staff Selection and Training

The Developer should prepare a staff development package which will address the needs of all personnel who will teach the Program during both the developmental and subsequent phases. All teachers must be fully competent bilinguals in both English and Spanish.

Ideally, teachers who are native speakers of the first language of the child or who can create a native-like, external nonverbal context should be employed on a priority basis during later phases.

"Formal" preservice and inservice staff training must address the following:

1. Attitudes of the teaching staff toward the nature of culture in general and toward their pupils' cultures in particular.
2. Skills in adapting curricula to the cultures represented in the classroom.
3. Working with aides and the community in classroom management.
4. Attitudes toward bilingualism and its development.
5. Attitudes toward linguistic variation and interaction of language use in society.
6. In-depth knowledge of the assumptions underlying the Behaviorist Model.
7. Skill in all techniques employed in the audiolingual method.
8. Techniques for informal assessment of student progress in both language and content areas.
9. Developing teacher and pupil skills for working in small groups.
10. Effective use of the classroom management techniques of reinforcement, modeling, and shaping in all content areas.
11. Incorporating the use of multimedia, including the language laboratory, according to specified objectives.
12. Assisting the teaching staff in awareness of specific values relating to the cultures represented in the classroom, avoidance of stereotyping, and addressing

the cultures represented in a positive supportive way resulting in a good classroom atmosphere for all pupils.

## Testing and Assessment

The Developer will have to provide for the early testing of students to determine (1) language dominance, (2) readiness in content areas, and (3) special developmental needs of children (e.g., attentional skills, ability to discriminate sounds) if these are deemed necessary on the basis of other test results.

Subject-specific testing, used to place children in each content area and to monitor their progress, will be the responsibility of the Developer, as will the frequent assessment of children's reactions to the language Program.

## Community and Parent Utilization

Community and parent resources can be utilized by the Site in a number of ways. First, adult members of the community can serve as instructional aides in the classroom or language laboratory.

Parents can be instructed by the home educator to apply the reinforcement principles used in the classroom in selected areas prescribed by the teacher, and they can also assist in diagnosing their children's academic needs.

Peer tutors or cross-age tutors can also be utilized in this program.

## Summary

Behaviorist psychology underlies all teaching methods and instructional activities in Language Arts, Social Studies, Mathematics-Science, and Cultural-Affective areas. All children should regularly attain incrementally

sequenced goals. The content core of this program is Language Arts. The curriculum is teacher-centered. The audiolingual method is the basis of second language learning.

Constructive analysis, careful sequencing of lessons, and placement based on assessed skills and developmental level provide the starting point for curricular planning. Furthermore, these considerations must take into account the child's development in two languages.

A language laboratory or similar source of second language experiences must be provided.

The social context of learning is emphasized. Cultural stereotyping is to be avoided.

The goal of this Program is to produce English and Spanish competencies in native English-speakers as well as in native Spanish-speakers so that instruction in most subject areas can be conducted in two languages and children can evidence growth in both languages while simultaneously achieving in all areas.

## The Immersion Model

### Model Description

The Immersion approach to the development of bilingualism has been described by Lambert and Tucker (1972) in the documentation of their Quebec program. In that program, English-speaking Canadians were immersed in a French academic environment. A considerably different social-motivational environment exists in the United States (Ervin-Tripp, 1970); therefore, certain adaptations must be made in the program to design a Model which is appropriate for Spanish-English bilingual education.

Unlike the other Models presented, Immersion is not bilingual in mode; all phases of instruction are conducted in the child's second language. The Developer will have to address the questions of when and how the child's first language is taught. In the Quebec experiment, the first language was introduced as a school subject in the third grade, resulting in enhancement of first language skills without compromise of second language attainments (Bruck, Lambert, and Tucker, 1973).

The Model Developer is expected to design two Programs initially, one for native English-speakers and one for native Spanish-speakers. Both Programs will be implemented at the same Site to facilitate extra-curricular cross-ethnic contact and to use to advantage the skills of peers who are native speakers of the target language.

There are several ways in which the Immersion Model differs from a traditional situation utilizing standard English curriculum. First, the Program must be very supportive of the child and of the values which his culture represents.

Secondly, the curriculum must carefully specify second language learning in the content areas as well as sequencing of course content from the time the child enters the Program. Formal presentations and other language interactions initiated by the teacher must be (1) carefully controlled, (2) designed to encourage verbalization by the child, and (3) developmentally sequenced to ensure language growth over time. This initial immersion of a child into the target language, for example, may cause less discontinuity if the activities are highly animated, use many context clues, and otherwise suggest the meaning of the accompanying utterances. Language use of the teacher should be specifically built into the curriculum as part of the process of presentation. The prospective Developer of the Immersion Model

should be referred to the program described by Price (1968) for a possible method of sequencing such a curriculum, particularly at the kindergarten level, although the approach used was not entirely compatible with a strict immersion approach.

Finally, the parents of the children must take a generally supportive role, though their participation in everyday classroom activities is sharply curtailed. Before the Program is implemented at a Site, parents should receive considerable training about the nature of this Program, their responsibility to establish the proper ambience at home, and their part in the continued development of the child's native language. They should receive frequent progress reports on their children and on the progress of the Program as a whole, and should continue to be contacted and encouraged by a community member who is part of the staff. Finally, the parents and other adult members of the community should be involved in ethnic-specific, language-appropriate, cultural activities provided to all pupils.

This involvement could be part of a larger program of learning and culturally enriching activities which may range from festivities conducted at the school to extra-curricular educational experiences, such as field trips.

The Developer should address the alternatives for integrating cultural aspects at a Site without compromising the immersion concept.

The Developer should also be aware of the critical factors that could potentially hinder successful implementation of the Model:

1. Extensive training of staff will be necessary prior to their entrance in the classroom. Inservice training will also be necessary to support this Model, necessitating a year-round commitment from teachers and extensive released-time for special training.

2. A corresponding commitment from the socio-political powers in the community served by the Model will be crucial for Model implementation success.
3. The continued monitoring of classroom performance will both support teachers in this unique opportunity and ensure that the process inherent in the Model is adhered to. This extensive use of monitoring can reinforce teachers in their development of controlled use of language in the classroom.
4. The Immersion Model runs the risk of compromising the culture of the child since it is addressed only as a topic for discussion and not as an integral part of the child's experience in the classroom. If this Model is to be successfully implemented at any Site, specific commitments must be made prior to its implementation as to how the child's culture, along with that of the target language, is to be involved.

Because of the unique features of the Immersion Model, the Developer may want to address specifically special extra-curricular activities to meet the cultural and first-language needs of students in the initial year. Special activities providing heavy reinforcement of culture and first language in connection with the school experience may be added during the first year to assist the children in adapting to the new experience. The parents and community can be involved here for the mutual benefit of all concerned.

## Treatment of Language

The Developer will need to address immersion as a concept, including animated gestures, modeling of how sentences are generated, showing

relationships between the language structures (questions/statements, positive/negative, present tense/past tense) as naturally occurring classroom phenomena. Therefore, illustrations that lend themselves to animation and other supportive materials will have to be dealt with much more specifically in this Model than in the others.

Teacher talk must be very carefully delineated and heavily supported by the Staff Development Component so that the teacher will know and understand her language role within the behavior of her larger role.

References to methods for teaching the deaf might be useful for content and sequencing.

The goal is for students to be able to use the target language as naturally and completely as they do their own--directly, with no attempt at translation. At the same time, they would be developing basic skills in content curriculum areas commensurate with their grade and/or age levels.

## Classroom Organization

The curriculum for the Immersion Model is teacher-centered and content-based. Instructional assistants are not imperative, but cross-aged tutors or aides could be helpful. Native speaker pupils from one Immersion group could be used to model the target language for the other Immersion group. This might be one way to enhance cultural aspects by encouraging descriptions and dramatization by one group for the other. It would also allow periodic experience in the children's first language. The teacher would coordinate all cross-group interactions. The curriculum would also specify how these activities would be dealt with in the curriculum and where they would occur in the sequence. Opportunities for the children to experience and further develop all the basic communicative skills in the target language must be

specifically described since exercises in the second language are not part of the Model.

Class size is a question to be considered, particularly with regard to this Model. Certain classroom strategies such as appropriate grouping for specified objectives are consistent with the Immersion Model.

## Materials

Materials for the Immersion Model should embody the child's second language exclusively. Extensive use should be made of highly animated and motivational audio and visual aides. Appropriate gestures and other interactional devices should be used and manipulated by native speakers to aid in the acquisition of appropriate language functions and structures. Materials relating to the child's own culture may be utilized but only in the target language.

Affective materials can be presented to handle concepts and attitudes toward development of cultural acceptance, especially during the early years, to present an awareness of differences in cultures as an acceptable and positive concept. The teaching staff should be aware of the need and familiar with methods for adapting curriculum to the cultures represented in the classroom.

## Staff Selection and Training

Specifically-skilled teachers, either monolingual or bilingual, will be required to teach in the Immersion classroom to be able to handle the kind of classroom processes involved. Teacher selection and training should emphasize the teacher's abilities in the following areas: (1) to handle the exclusive treatment of curriculum in the second language of the child; (2) to

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develop second language structural sequences within the curriculum, including knowing where new structures are introduced and how to introduce them, modeling structures within content areas and being aware of how children can respond, and knowing thoroughly how the language is developed through the content areas; (3) to use effective techniques to present the language structures; (4) to understand and deal with the cultural shock the children will experience; (5) to be supportive of the child's language and culture without addressing him in his language; and (6) to be respectful of children as individuals.

Extensive preservice and inservice training are required to give the teaching staff the support they will need to carry out all aspects of immersion in the classroom. Preservice and inservice staff training should address the following:

1. Attitudes of the teaching staff toward the nature of culture in general and their pupils' cultures in particular.
2. An extensive number of very explicitly addressed skills regarding the introduction of language competencies and content areas and their interrelationships.
3. The philosophy of immersion as well as the methodology involved in its classroom application.
4. Method of working with children in an immersion system; culture shock, how to recognize and deal with it in a positive manner.
5. Method of maintaining pupils' motivation for learning and a positive attitude toward the immersion approach.

6. Classroom management relative to the objectives in the content areas.
7. Respect for children's different learning styles.
8. Attitudes toward linguistic diversity and interaction of language use in the classroom.
9. Techniques for informal assessment of student progress in both language and content areas.
10. Developing pupil skills for individual and small group learning.

## Testing and Assessment

Lambert and Tucker's (1972) research instrumentation delineates the areas specified for their program assessment. They emphasize, in addition to the trends of second and first language competencies, the tracing and monitoring of the evolution of attitudes toward school and the several ethnic groups, including the child's own, as important facets of the evaluation of immersion programs. Any negative aspect of a pupil's or parent's attitude toward the second language or the culture it represents presages a serious loss of motivation or achievement in this kind of program. In addition, specific measures of language dominance and bilingualism must be developed in order to effect an adequate grouping of children and to promote certain inter-ethnic contacts. The Developer could consider utilizing or adapting some of the instrumentation used by Lambert and Tucker as well as other immersion projects in the United States to ease the developmental load of instruments that will be needed for this Model.

The Immersion Model is probably the highest risk Program of the four proposed, and in the event that Immersion must be discontinued for one or

more school campuses or types of pupils, the decision will likely rest on information gathered from these instruments.

### Community and Parent Utilization

A bilingual home-school liaison officer selected from the community by both the Model Developer and the Site will facilitate the flow of information between parents and teachers, community and program. Parents should receive some instruction in how to better develop their children's native language skills, using naturally arising situations as starting points for their informal teaching efforts.

### Summary

A special effort to secure parental cooperation and extensive understanding in the community will be required in order to provide a strong base of support for this unusual approach to the development of bilingualism and multicultural competencies. The concept of immersion is not well understood in the Spanish-English bilingual education practitioner community generally, and may be misunderstood by Mexican-American leaders and educators as being the standard English program in different trappings, since it is principally monolingual in mode. Although parental participation in actual classroom activities is minimal, Lambert and Tucker (1972) have carefully documented the crucial role parents can play in establishing a receptive ambience for such a program in the school and in the larger community and in expanding their children's native language competencies.

This teacher-centered Model requires, in addition, strong support of and for the teaching staff so that they may, in turn, ensure its most advantageous application in the classroom and its most positive effects on the pupils.

## The Eclectic Model

### Model Description

The Eclectic Model represents the use of methodologically consistent materials chosen to implement a performance-based sequence. The Model should primarily reflect a comprehensively conceptualized sequence of specified behaviors from K-3. Materials would then be selected for their proven effectiveness in developing these skills. This Model would require highly specific coordinated staff training to implement the various components into a consistent developmental Program. The Model, probably more than any other, can provide for and accommodate active community participation within the school setting.

The Eclectic Model is designed to lend some systematization and cohesiveness to the selected combination of materials and instructional practices of extant ongoing bilingual programs. In so doing the Model will necessarily exemplify the basis and the means for selecting available materials in support of specified objectives. This would include the Developer's identification of skills necessary for an effective bilingual Program as a necessary first step before materials can be identified.

Site-specific alternatives for adaptations of this Model should be clearly delineated by the Developer. Adaptations and their implementation at different Sites should be done systematically so that different Models will not occur at different Sites.

The Model should include a parent education program to inform parents about the academic and cultural goals of the Model as well as to suggest at-home activities for reinforcing the school efforts.

The Model must provide for initial instruction in the local dialects

of English and Spanish and periodic instruction in the dialects thereafter.

The Developer must avoid mere nominalism in specifying the nature of the eclectically derived treatment. This Model is eclectic in its use of materials and methods, not in its origins or objectives. A review of extant bilingual programs for integrated settings produced no program which meets all the constraints imposed by the present Model.

The Developer must also clearly describe the way the materials will be used so that adaptation criteria will not be violated. These criteria should be specified on a daily, monthly, and yearly basis. The Developer can assist this process of implementation by defining clear options for scheduling and cycling students in small groups, the very practical aspects in terms of alternatives.

## Treatment of Language

The Developer will have to address specifically the treatment of second language development within the various materials selected to meet the language goals of the Model. The treatment of language should be prescribed through the materials chosen. Rather than give a set of assumptions regarding how language should be approached, there should be a representation of what has been proven successful from extant programs.

The treatment of first language use, of second language introduction, of dialect use, and the merging of these will have to be specifically addressed, and should be decided on the basis of demonstrated success of the practices involved. The coordination of simultaneous instruction of both Spanish and English dominant children within the classroom must also be determined in a similar manner by the Developer.

## Classroom Organization

The Eclectic Model is well adapted for use in self-contained classrooms where the teaching staff either direct or manage classroom activities. Various skill or subject areas can be set up in the classroom where pupils may be taught in small groups or work independently. With the potential resources of parent and community participation in the classroom, grouping, correlated to the Model objectives, should be easily accommodated by this Model.

## Materials

Other Models presented in this document require strong conceptual capabilities in the Developer; the Eclectic Model, in addition, requires a well-delineated, well-described set of goals for an overall implementation of a K-3 developmental effort as well as more specific grade-level objectives so that the basis for material selection is precisely stated. The subsequent choice of materials and methods will be based on demonstrated greater empirical effectiveness as well as demonstrated ease of adaptability. New instructional materials should be developed only where extant materials do not meet the specified objectives.

A Staff Development Component developed for those materials not having adequate teacher training provisions may be necessary. After materials have been selected, the Developer may want to implement a special Staff Development Component addressing the needs of the other substantive Components to provide consistency and wholeness to the effort.

Several products lend themselves to ready adoption by or adaptation to a Program based on this Model, given the compatibility of objectives. One set, the materials developed by the Spanish Curriculum Development Center

is comprehensive for Spanish speakers for grades 1-3; furthermore, these materials have been adapted by the Curriculum Adaptation Network for Bilingual-Bicultural Education into several regional versions, principally through revisions and the use of supplementary instructional and affective materials.

The following list presents an illustrative collection of materials for use in an K-3 Eclectic Program:

K - Bilingual Kindergarten Program, (Southwest Educational Development Laboratory [SEDL], 1973b). Skill areas: Visual, auditory, motor, pre-writing, Syntax of English, Ideas and Concepts, Thinking and Reasoning;
SSL program, (Spanish Curriculum Development Center [SCDC], 1973);
Language Arts, Oral Language and Listening Comprehension lessons (Spanish), (SCDC, 1973).

1 - Bilingual Oral Language and Reading (BOLaR) Program, (SEDL, 1973a): ESL, SSL, English and Spanish Oral Language and Reading;
Social Studies, Fine Arts (music) and Science-Mathematics strands, (SCDC, 1973);
Supplementary materials and regional adaptations, (Curriculum Adaptation Network for Bilingual-Bicultural Education [CANBBE], 1974);
"Labs" (English), (Science Research Associates [SRA], 1974).

2 - Bilingual Oral Language and Reading (BOLaR) Program, (SEDL, 1973a): ESL, SSL, English and Spanish Oral Language and Reading;
Social Studies, Fine Arts (music) and Science-Mathematics strands, (SCDC, 1974);
Supplementary materials and regional adaptations, (CANBBE, 1974);
"Labs" (English), (SRA, 1974).

3 - All strands, (SCDC, 1974), Social Studies, Language Arts, Fine Arts, Mathematics-Science (Spanish);
Supplementary materials and regional adaptations, (CANBBE, 1974);
"Labs" (English), (SRA, 1974);
Other English materials, e.g., basal readers.

The above list serves only as an illustration of how extant programs might be selected or combined, and is not intended for any other purpose, especially since no reference to overall goals or objectives has preceded this collection of products.

## Staff Selection and Training

Principal teaching staff should be fluent bilinguals. Community participants in the classroom would not be expected to be bilingual, but would rather be used for reinforcing ethnic values and in culturally motivating roles. Community participants can also be used as instructional aides in the classroom working as part of the teaching staff in terms of performance objectives. The Developer of this Model must specifically delineate the teacher's management responsibility in the classroom (Brophy, 1973). The teacher will be required to manage the various materials provided in the Program as well as the various kinds of personnel in the classroom.

Inservice should address the teaching needs with respect to the various materials selected to achieve the objectives. The scope and sequence of the curricular Program would provide the core of the staff development effort: specific knowledge of what the Developer has set up as the criteria and goals of the Program, and how these are to be realized. Equally as important will be the ability, developed and monitored through the staff development effort, for utilizing all the various human resources present in the classroom, sensitivity to them, and handling of their abilities for the greatest benefits to the pupils, both in terms of academic talents and potential to effect ethnic respect in the classroom.

## Testing and Assessment

This Model's objectives and evaluation will constitute the conceptualizing function of the Developer. The objectives and the evaluation of those objectives must be accomplished prior to selection of materials. Those objectives chosen can be used to assess ongoing content mastery, since,

presumably, they will support rather than oppose the overall goals.

Since this is a performance-based Model, the use of objective-based measurement should be heavily relied on for prescriptive and mastery assessment.

### Community and Parent Utilization

The use of adults as instructional and clerical aides and of peers or older youths as tutors is recommended as a Model feature. Many materials may also be employed by parents to reinforce the more formal educational efforts of the teacher. The home educator will coordinate activities in the home and in the classroom and may acquire certain sets of materials for "at home" use. These materials need not be exactly like those used in the classroom but they should be keyed to particular instructional objectives or to general curricular areas at the appropriate level of difficulty.

Community members, furthermore, may be used in the materials adaptation effort as resource persons, contributing to the formulation of locally relevant or appropriate forms of the curriculum.

### Summary

The Eclectic Model is designed to make use of current materials and instructional practices which have proven effective and which can combine to implement a performance-based sequence of skills development, K-3. Primary instruction is in the first language/dialect, which is used periodically thereafter for instruction. The classroom is self-contained with a bilingual teacher directing group and individual instruction, assisted by classroom aides and youth tutors. Parents have supportive materials for home reinforcement. The Model is designed to be Site-specific, so that the

community can have involvement in decision making. Staff training in each case should relate to materials and methodologies selected.

## The Child-Centered Model

### Model Description

The Child-Centered Model is based on Piagetian developmental theory and the cognitive-nativist linguistic position held by Chomsky (1965). The Model is designed to be responsive to the needs and the self-initiated activities of the child. The environment gives the appearance of being open and unstructured, relying on the child's motivation to guide him in his own natural development. However, while this feeling is evident in the classroom, the environment is actually structured in the alternatives it presents to the child and is carefully adjusted for his current developmental level(s) and for promoting his growth. Learning takes place in a natural, informal atmosphere where the child is allowed to set his own pace. The alternatives open to the child, however, ensure that any choice he makes will promote growth in areas crucial to personal, linguistic, and general academic development. The child is motivated to experience new areas through the general facilitation of a master teacher. The subject matter of the curriculum should be experience-based, with linguistic skills being presented initially through a social studies experience. Hence, educational experiences will often take the children outside of the physical classroom and even beyond the boundaries of the school itself. Initial instruction must occur in the child's dominant language; the second language is introduced very carefully in a designated learning center(s) along with a specific part of the child's day being devoted to second language skills proficiency. This would last no more than 15 minutes each day and would be used to address sentence

structure types. Each learning center will provide for a developing need to communicate with respect to its content area. The Developer should carefully provide for the linguistic experiences the child will have in the content areas.

The motivational aspect of the Model rests on pupil self-selection of activities and the teacher's ability to enlarge on pupil interest. The child is at the center of the learning process and learns very early that he is responsible for his learning (Chittenden & Bussis, 1971). The Model recognizes that feelings of self-acceptance can be a powerful motivation in school children; by presenting highly structured alternatives, any one of which will assure developmental growth, in a free choice environment, feelings of success are developed in children which can result in their continued motivation to learn (Heimgartner, 1972). Learning and teaching in this Model should be exploratory, personally rewarding, and fun.

An open classroom concept with a variety of interest centers staffed or generally supervised by capable, warm (Bussis & Chittenden, 1970), sensitive adults and containing a developmentally selected variety of materials should accommodate children at different cognitive stages of development. Individualization is achieved through self-pacing and informal student interactions with parents, tutors, aides, student teachers, and master teachers. Since acquisition of one's first language is a naturally occurring phenomenon resulting from the child's inherent verbal capacity with the environment, second language learning provides organized selected data to allow the same process to occur within the second language (Lenneberg, 1967). The interest centers and the materials must be presented in both languages; and the level of linguistic complexity must also be controlled in terms of developmental needs.

Readiness is a key concept in the progress of a child from one level of activity to another or from one type of activity to another. Indeed, the teacher's role may be regarded as that of an "active experimenter" (Bussis & Chittenden, 1970), one who uses the resourcefulness of children as the starting point of instruction. Self-selected activities are enhanced by teacher-facilitated variety and assistance in learning. Formal or fixed periods of instruction are, consequently, nonexistent, with the exception of a special time devoted to instruction of the second language structures needed to enable children's use of the activity centers. Learning is an all-day activity for the child in that the developmental process for moving through projects is stressed as much as content mastery. In this respect the above provide process development as well as content mastery.

Through the school years, topics which are presented move gradually from a concrete experiential base to more abstract concepts, following the Piagetian sequence. Through the school years these topics are presented with ever increasing sophistication, in the Piagetian sense, and the child's information base is also permitted to expand as new subjects within these topics are explored.

Programs similar to the Child-Centered Model have shown great variation in implementation success (Brookings Institute, 1972), and some confusion still exists about the very concept of openness (Katz, 1972). Consequently, steps should be taken to ensure that Model specifications are adhered to and to establish a process by which detected deficiencies or deviations from these specifications can be corrected in a timely manner. Wolf (1971), Cohen (1973), and Elofson (1973) suggest that it is the nature of the interpersonal transactions and the management of learning which ultimately differentiate open education from the more traditional classroom arrangements.

## Treatment of Language

The Developer must conceptualize and provide methods and techniques the teachers can use to determine the children's dominant language. This information is crucial to setting up the interest centers. Natalicio and Williams (1972) discuss various techniques for a teacher's use. The major portion of the child's learning activities must be conducted in that language until the child's interest and competencies in the second language dictate otherwise. These competencies will be carefully developed and monitored through the language experiences specifically introduced each day.

These specifically addressed language experiences should be introduced daily in 15-minute sessions where highly structured syntactical processes are presented in the second language so that the child gradually begins to develop a set of internalized rules leading to proficiency in the second language (Southwest Educational Development Laboratory, 1972c). The National Puerto Rican Development and Training Institute report (1973) proposes that a child will want to learn another language if the following conditions exist:

1. The important people in his life speak it.
2. The important people in his life have a positive attitude toward it.
3. Activities interesting to him are gradually presented in that language and carefully controlled for difficulty.
4. The child experiences success in communicating in that language.

How the teacher organizes the classroom for learning can also be instrumental in helping children experience the second language in a way

which is as natural as possible. Once predetermined levels of proficiency in the second language have been acquired, the teacher's strategies in the activity centers include modeling the second language and helping children verbalize what they are doing in that language. The teacher, of course, will take her cue from the child.

A flexible Language Experience Approach to Reading (LEAR) and creative expression, such as that described by Raymond (1972) should be incorporated into this Model for the second language as well as the first. Hall (1972) has summarized and critiqued the research on LEAR vis-a-vis "disadvantaged children." Activities in both languages should provide enough interest in themselves so that children from both languages will want to do them together; in this way cross-language grouping could occur.

## Classroom Organization

The physical organization of the immediate learning environment will depend on the developmental level of the children relative to the activity centers, the developmental level of the children in both languages and, to a lesser extent, the architectural design of the building. Changes in the physical organization will occur as the needs of the children change because of academic and linguistic development.

The following guidelines contain suggested provisions for activity centers in an open environment (Southwest Educational Development Laboratory, 1973c):

- An area for gross motor development.
- An area for fine motor and perceptual development.
- An area full of manipulative materials of various textures.
- A technology or multi-media equipment center (TV, cassette recorders, Languagemasters, listening stations, etc.; records,

tapes, filmstrips, cassettes, etc.).

- A library area well supplied with books in both languages.
- A role-playing area equipped with "adult" clothes, gadgets, and other realia.

The early primary grades (1, 2, 3) should have several open space centers, including

- A Language Arts area (library, listening stations, etc.).
- An area for fine motor and perceptual development.
- An area full of manipulative materials of various textures.
- A Science/Mathematics area--live animals for observation; materials in the fields of physics, biology, chemistry, mathematics, engineering, etc., suitable for the pupils.

Major questions to be answered in the physical organization of the learning environment include (Southwest Educational Development Laboratory, 1973e)

- How responsive is it in terms of motivating children?
- How and where are displays set up?
- Are the equipment and material suitable for the children's developmental levels?
- Are the materials in the interest areas changed as the children's needs change?
- Do the numbers and arrangements of interest areas reflect the current needs of the children?

The ongoing process of providing suitable answers on a daily basis to the above questions requires skilled classroom management in organizing for instructional experiences.

Individualization of instruction which proceeds from a child's self-initiated activities and interests cannot take place if many children are

involved without a variety of adult staff members (paid or volunteer) working under the direction of a master teacher. A minimum of two adults is necessary for a self-contained, open classroom in a bilingual-multicultural setting. A school architecturally designed for the open space concept, in addition, provides many other opportunities for differentiated staffing patterns and a greater number and types of interest centers to accommodate more students.

Organization of the instructional staff will depend upon the human resources available. Consider all of the following as sources of paid or volupteer help:

- Teacher-facilitator(s).
- Teacher assistant(s).
- Family volunteers (including older members).
- Youth tutors.
- Peer tutors.
- Student teachers.
- Community and college volunteers.

As more personnel, children, or program options are involved in the educational process, the role of the master teacher becomes that of a manager of instructional activities.

## Materials

The Developer should consider the organizational format of the facility in specifying the teacher's roles and the roles of other staff. Objectives or guidelines should be set up defining expectations for student development. The Developers should then determine what kinds of materials will be used, including a selection from available materials supplemented by some of his own design.

## Staff Selection and Training

In this Model, the term "staff" includes all personnel (administrators, supervisors, teachers, counselors, teacher-assistants, parents, youth-tutors, etc.) who may be involved with the pupils in an instructional capacity or who otherwise significantly affect their education. This Model, more than any other proposed for the Planned Variation study, requires a skillful, sensitive staff, along with continuous staff training, in terms of the environmental organization, developmental levels, and linguistic competencies represented, and materials used. Interpersonal staff relationships must be specified as well as training for interpersonal functions. Teaching staff will be expected to appraise each other's performance.

There are two ways of approaching staff selection. One option is that only staff who volunteer for the Program or whose attitudes and skills match the Program goals should be hired. Another option is that of changing staff attitudes and developing the skills in the existing staff as necessary, using selected replacements as a last resort. A related question is, "Who is responsible for staff selection?" This will depend on the Site's decision-making process and the degree of community control, but carefully stated, precise guidelines should be provided by the Model Developer.

The criteria for the selection of instructional staff will be bilingual proficiency, a demonstrated respect for children as persons (Bussis & Chittenden, 1970), an orientation toward the open concept of organization, and a willingness to receive the critical professional appraisal of other staff members and the Developer's training team. The staff must be willing to operate with a flexible format or with several formats.

The positive attitudes, sensitivity, and competencies of the staff required by this Model place excellence in staff training as the key to successful Model implementation. The staff training must proceed from the Developer's plan for the Program Model and must utilize the techniques which the different staff members will themselves be expected to implement. Different types of staff will require different training sessions, while all staff will participate in some sessions. Individualization of training should be accommodated whenever possible. Needless to say, an unusual amount of staff cooperation needs to be effected; traditional roles will have to be redefined in order to realize the greater teamwork required. In no instance, for example, should the Child-Centered Model be imposed on any professional staff in an attempt to stimulate the Model's implementation (Chittenden & Bussis, 1971).

Some general areas for staff training include:

- Specific training in the philosophy and methods of the Program Model.
- Staff differentiation: conceptualization of the role of each staff member in successful Program implementation.
- Sensitivity to the community's cultures.
- Theoretical foundations: this should include general learning theory, child development theory, and language acquisition and language learning theories.
- Understanding curriculum development and how it proceeds from the learning theories implemented in this Model.

Instructional personnel should additionally receive intensive training in the following areas:

- Classroom management strategies, including how to

individualize instruction.

- Informal diagnostic techniques in the various skill areas, including how to record each child's progress.
- The use of both languages for instructional activities, especially in the structures needed to express particular academic content.
- Techniques for unobtrusive language correction and expansion.
- The Language Experience Approach to Reading.
- The guidance of learning opportunities and the elaboration of student interest.

The principal thrust of the Model Developer's efforts, then, must be directed at the inservice training of staff, for this Model clearly emphasizes staff cooperation, a percipient awareness of student needs, and the interpersonal and group techniques necessary to capitalize on the learning possibilities of the moment.

Effective classroom management strategies, particularly those governing active student behaviors, must be mastered and consistently applied by the teaching personnel if their facilitation of learning activities is to be carried out (Southwest Educational Development Laboratory, 1972a). In this fashion each child can exercise certain options within the bounds of classroom responsibility.

## Testing and Assessment

Regular assessment is needed to determine student progress, children's developmental stages, growth in language proficiencies, and determination of learning styles.

The Developer and the agency charged with evaluating the entire experiment should work closely in the adaptation or design of instruments for measuring child-adult, child-skill, inter-ethnic transactions, the physical arrangement of the classroom, and implementation success. Kosower, Schulman, and Steingieser (1972) list some of these variables and attempt to operationalize them. Bussis and Chittenden (1970) and Chittenden and Bussis (1971), furthermore, discuss product and process evaluation for both classroom and staff development activities, including the need for certain types of instrumentation, techniques for baseline data gathering, and ways of estimating implementation success.

## Community and Parent Utilization

Because of the emphasis which this Model places on the natural facilitation of learning based on the child's experience, a high degree of community and parental involvement in educational experiences--within the classroom and during excursions outside of the school--should be effected.

## Summary

The Child-Centered Model is based on Piagetian developmental theory and Chomsky's cognitive-nativist linguistic position. Initial instruction is in the child's dominant language with the second language introduced as the child is motivated and is developmentally ready to accept instruction. Language is addressed through content areas, and learning occurs in an open classroom setting which maximizes self-pacing, self-choice, and cross-language grouping. Staff members should be bilingual and accepting of children. Staff training should be highly individualized and continuous, stressing classroom management skills necessary for individualization and differentiated staffing. It should be based on the philosophy and methodology of the Model. Classroom aides and youth tutors will supervise interest

centers which encourage exploration and perceptual development. Parents should be trained to facilitate self-initiated learning in the home and, further, be encouraged to assist with classroom activities and field trips.

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